



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,215	03/31/2004	Takashi Furukawa	SON-2965	3882
23353	7590	02/08/2008	EXAMINER	
RADER FISHMAN & GRAUER PLLC LION BUILDING 1233 20TH STREET N.W., SUITE 501 WASHINGTON, DC 20036			FLETCHER, JAMES A	
		ART UNIT		PAPER NUMBER
		2621		
		MAIL DATE	DELIVERY MODE	
		02/08/2008	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/813,215	FURUKAWA ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	James A. Fletcher	2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 October 2007.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,2,5-7 and 12-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2,5-7 and 12-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 March 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____.                                     |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/07</u> .   | 6) <input type="checkbox"/> Other: _____.                         |

## DETAILED ACTION

### ***Response to Arguments***

1. Applicant's arguments filed 14 March 2007 in reference to claim 1 have been fully considered but they are not persuasive.

**In re page 12,** Applicant's Representative states: "Applicant hereby requests a reference or an Examiner's affidavit to support this officially noticed position of obviousness or what is well known."

The Examiner notes that disclosure of time-division multiplexing of video signals is made by, among many others, Moskovitz et al (3,562,421), Col 1 lines 36-47; Candy et al (3,571,807), Col 3 line 63 – Col 4 line 13; and Shimamura (3,573,364), Col 5, lines 62-75.

**In re page 13,** Applicant's Representative states: "this assertion amounts to nothing more than an 'obvious-to-try' situation."

The Examiner respectfully disagrees. As is understood by those of skill in the art, a single bit stream, such as that recorded on a medium, is almost certainly time-division multiplexed if that signal is to carry multiple strings of data. While there are other forms of multiplexing, they do not apply to a single bit stream such as the one disclosed in the instant application.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 14 recites the limitation "said reproduction speed." There is insufficient antecedent basis for this limitation in the claim. Claim 12 recites a plurality of reproduction speeds, and it is unclear which, if any, of these reproduction speeds is being referenced. The Examiner will analyze this claim as though either or both speeds are being referenced.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 12-14, 16, and 18-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Mishima et al (6,009,236).

**Regarding claim 12**, Mishima et al disclose a reproducing device adapted to play back video data recorded on an information recording medium, the reproducing device comprising:

- a controller adapted to set reproduction speeds of the video data (Col 37, line 36 "special playback is performed"), said reproduction speeds including a normal playback and a high-speed playback (Col 15, lines 13-14 "the normal playback" and Col 29, line 53 "a high speed playback picture is outputted"), said high-speed playback being at a higher speed than said normal playback (Col 29, lines 54-55 "a 15 times speed special playback picture can be obtained");

- a drive adapted to read out said video data from the information recording medium (Col 27, lines 53-55 "video information read from the recording medium is inputted from an input terminal 20 to a demodulator 21"), said video data including main track data being read out during said normal playback and low resolution data being read out during said high-speed playback (Col 20, lines 39-43 "At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution"); and
- a decoder adapted to generate an output image from said video data, said output image being viewable on a screen (Fig. 10, item 782 "Video Signal Decoder" and item 784 "Monitor"),
- wherein, during said normal playback, said screen displays a frame of said main track data (Col 20, lines 22-28 "At the time of the normal playback, the coded data of the low resolution component and the coded data of the high resolution component which is the differential component between the low resolution portion and the data before being thinned into a low resolution are synthesized so that a picture with a complete resolution component can be decoded"), and
- wherein, during said high-speed playback, said screen is divided into areas (Col 37, lines 44-47 "the P4 picture is played back in the area 1, the P3 picture is played back in the area 2, the P2 picture is played back in the area

3, and the P1 picture is played back in the area 4 and the I picture in the area 5"), said areas of said screen partially displaying different frames of said low resolution data (Col 20, lines 39-43 "At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution" and Figs 26A-26D).

**Regarding claim 13,** Mishima et al disclose a reproducing device wherein said reproduction speed is set at a predetermined acceleration (Col 37, line 36 "special playback is performed").

**Regarding claim 14,** Mishima et al disclose a reproducing device wherein said video data are read out at said reproduction speed (Col 20 lines 22-27 "At the time of the normal playback, the coded data of the low resolution component and the coded data of the high resolution component which is the differential component between the low resolution portion and the data before being thinned into a low resolution are synthesized so that a picture with a complete resolution component can be decoded" and lines 39-43 "At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution" and Col 16, lines 60-64 "at the time of the special playback; the data to be accessed decreases so that a smooth special playback can be obtained by gradually decreasing the data amount to be accessed at the time of the special playback").

**Regarding claim 16,** Mishima et al disclose a reproducing device wherein said main track data and said low resolution data are on said information recording medium (Col 20 lines 22-27 "At the time of the normal playback, the coded data of the low resolution component and the coded data of the high resolution component which is the differential component between the low resolution portion and the data before being thinned into a low resolution are synthesized so that a picture with a complete resolution component can be decoded" and lines 39-43 "At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution" and Col 1, lines 14-16 "a digital video signal record and playback device for recording and playing back on a medium such as an optical disc").

**Regarding claim 18,** Mishima et al disclose a reproducing device wherein, at a transition from said high-speed playback to said normal playback, an acceleration in accordance with time required to read out and decode said main track data is calculated so as to perform deceleration at a deceleration corresponding to said calculated acceleration (Col 51, lines 42-43 "normal continuous playback or the like is inputted to the mode switcher 76 from the microcomputer").

**Regarding claim 19,** Mishima et al disclose a reproducing device wherein, at a transition from said normal playback to said high-speed playback, an acceleration in accordance with time required to read out and decode said low resolution data is calculated so as to perform acceleration at said calculated acceleration (Col 16, lines 60-64 "at the time of the special playback, the data to be accessed decreases so that a

smooth special playback can be obtained by gradually decreasing the data amount to be accessed at the time of the special playback").

**Regarding claim 20,** Mishima et al disclose a reproducing device wherein, when acceleration and deceleration are terminated so as to perform normal playback, a screen has a fixed arrangement in accordance with a speed at the time (Fig. 20 illustrates a predetermined screen with high speed playback and Col 34, lines 5-11 "the special playback may be performed so that the playback picture as shown in FIG. 26 is outputted. In this case, the format decoder 23 synthesizes one screen by playing back each one area from the I pictures of five GOP's which are continuous as shown in FIG. 26").

**Regarding claims 21 and 22,** Mishima et al disclose a reproducing method and program on a medium for playing back video data recorded on an information recording medium, the method comprising the steps of:

- setting reproduction speeds of the video data, said reproduction speeds including a normal playback and a high-speed playback (Col 15, lines 13-14 "the normal playback" and Col 29, line 53 "a high speed playback picture is outputted"), said high-speed playback being at a higher speed than said normal playback (Col 29, lines 54-55 "a 15 times speed special playback picture can be obtained");
- reading out said video data from the information recording medium (Col 27, lines 53-55 "video information read from the recording medium is inputted from an input terminal 20 to a demodulator 21"), said video data including

main track data being read out during said normal playback and low resolution data being read out during said high-speed playback (Col 20, lines 39-43 "At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the device so that a rough picture can be decoded by decoding only the coded data of low resolution"); and

- generating an output image from said video data, said output image being viewable on a screen (Fig. 10, item 782 "Video Signal Decoder" and item 784 "Monitor"),
- wherein, during said normal playback, said screen displays a frame of said main track data (Col 20, lines 22-28 "At the time of the normal playback, the coded data of the low resolution component and the coded data of the high resolution component which is the differential component between the low resolution portion and the data before being thinned into a low resolution are synthesized so that a picture with a complete resolution component can be decoded"), and
- wherein, during said high-speed playback, said screen is divided into areas (Col 37, lines 44-47 "the P4 picture is played back in the area 1, the P3 picture is played back in the area 2, the P2 picture is played back in the area 3, and the P1 picture is played back in the area 4 and the I picture in the area 5"), said areas of said screen partially displaying different frames of said low resolution data (Col 20, lines 39-43 "At the time of the special playback, a decoding mode is switched over in accordance with the operating state of the

device so that a rough picture can be decoded by decoding only the coded data of low resolution" and Figs 26A-26D).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 5-7, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mishima et al.

**Regarding claim 1**, Mishima et al disclose a reproducing device for playing back video data recorded on an information recording medium (Col 1, lines 14-15 "playing back on a medium such as an optical disc"), comprising:

- setting means for setting a reproduction speed of the video data depending upon a predetermined acceleration (Col 37, line 36 "special playback is performed");
- readout means for reading out the video data from the information recording medium (Fig. 1, item 208 and Col 1, lines 40-42 "reference numeral 213 denotes a playback amplifier for amplifying a playback signal from the optical head 208"); and
- generation means for combining a plurality of images of the video data so as to generate an output image for high-speed playback (Col 37, lines 44-47 "the

P4 picture is played back in the area 1, the P3 picture is played back in the area 2, the P2 picture is played back in the area 3, and the P1 picture is played back in the area 4 and the I picture in the area 5").

- wherein first video data at a high bit rate and second video data at a lower bit rate than that of the first video data for a same material are recorded on the information recording medium (Col 29, lines 10-14 "a priority is given as an area located at the central part of the screen out of the I picture data which is divided into three parts so that the area is located at the front of one GOP");  
and
- the readout means reads out the second video data from the information recording medium (Col 29, lines 14-17 "in the case where only a part of the area of the I picture can be decoded in a definite time at the time of a high speed playback, at least the playback picture at the central part of the screen can be outputted");

Mishima et al disclose different rates of recording standard and trick play streams as analyzed and discussed above, but does not specifically disclose intermittently recording both on the same track of the recording medium.

The Examiner takes official notice that intermittent recording of multiple streams of data, also known as time-division multiplexing, is notoriously well known, commercially available and widely used, allowing a programmer to place several different signals in the same data path.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mishima in order to provide for intermittent recording of the various streams.

**Regarding claim 2,** Mishima et al disclose a reproducing device wherein the generation means extracts and combines band-shaped parts from the number of images corresponding to the reproduction speed set by the setting means, respectively, so as to generate the output image for the high-speed playback (Col 37, lines 44-47 "the P4 picture is played back in the area 1, the P3 picture is played back in the area 2, the P2 picture is played back in the area 3, and the P1 picture is played back in the area 4 and the I picture in the area 5").

**Regarding claim 5,** Mishima et al disclose a reproducing device wherein, at a transition from the high-speed playback using the second video data to low-speed playback using the first video data, an acceleration in accordance with time required to read out and decode the first video data is calculated so as to perform deceleration at a deceleration corresponding to the calculated acceleration (Col 51, lines 42-43 "normal continuous playback or the like is inputted to the mode switcher 76 from the microcomputer").

**Regarding claim 6,** Mishima et al disclose a reproducing device wherein, at a transition from low-speed playback using the first video data to high-speed playback using the second video data, an acceleration in accordance with time required to read out and decode the second video data is calculated so as to perform acceleration at the calculated acceleration (Col 13, lines 5-10 "At the time of the special playback, only the

data of the I picture is read in the unit of area, and regions in the areas 1, 2, - - - n are read one by one from consecutive n I pictures with the result that pictures for one screen portion is synthesized and is outputted as a playback picture").

**Regarding claim 7**, Mishima et al disclose a reproducing device wherein, when acceleration and deceleration are terminated so as to perform normal-speed playback, a screen has a fixed arrangement in accordance with a speed at the time, regardless of a process of the acceleration and deceleration (Fig. 20 illustrates a predetermined screen with high speed playback).

**Regarding claim 15**, Mishima et al disclose a reproducing device wherein a lesser amount of data is read from the disk for low resolution data than for main track data (Col 15, lines 1-8 " At the time of the special playback, data arranged at the front is decoded and outputted for the special playback. Consequently, the data decreases which is to be accessed at the time of the special playback by dividing data depending on the frequency area, quantizing level or the space resolution with the result that a smooth special playback picture can be obtained") but do not explicitly disclose that the decoding of a lesser amount of data takes a shorter amount of time than the decoding of the main track data.

The Examiner notes that common sense dictates that a process of doing less work, such as decoding a small amount of data, takes less time than doing more work, such as decoding a large amount of data, given that a finite effort worker, such as a processor, is performing the task.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mishima et al in order to note that the decoding of low resolution images takes less time than the decoding of main track images.

**Regarding claim 17**, Mishima et al disclose different rates of recording standard and trick play streams as analyzed and discussed above, but does not specifically disclose intermittently recording both on the same track of the recording medium.

The Examiner takes official notice that intermittent recording of multiple streams of data, also known as time-division multiplexing, is notoriously well known, commercially available and widely used, allowing a programmer to place several different signals in the same data path.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Mishima in order to provide for intermittent recording of the various streams.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (571) 272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JOHN MILLER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600